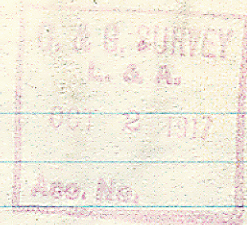


3972

Diag. Cht. No. 6450-1 & 6460-1



28



Form 504
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

State: *Washington.*
11-5813

DESCRIPTIVE REPORT.

Wyd. Sheet No. *3972*

LOCALITY:

Puget Sound.
Richs Passage &
Sinclair Inlet.

191 *7*

CHIEF OF PARTY:
J. A. Daniels.

3972

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

The finished Hydrographic Sheet is to be accompanied by the following title sheet, filled in as completely as possible, when the sheet is forwarded to the Office.

U. S. Coast and Geodetic Survey.

Register No. 3972

State Washington

General locality Puget Sound

Locality Rich's Passage and Sinclair Inlet

Chief of party John A. Daniels

Surveyed by John A. Daniels, B. C. Freeman

Date of survey Feb. 5 to March 5, 1917

Scale 1:10,000

Soundings in Feet

Plane of reference 2 feet below M. L. L. W.

Protracted by B.C.F., G.L.B. Soundings in pencil by B.C.F., G.L.B. and

Inked by B.C.F., G.L.B. Verified by

Records accompanying sheet (check those forwarded):

Des. report, 1 Tide books, Marigrams, 1 Boat sheets,

1 Sounding books, 2 Wire-drag books, Photographs.

Data from other sources affecting sheet

Remarks:

DESCRIPTIVE REPORT SHEET 3972

The area included within the limits of this sheet extends from Orchard Point through Rich's Passage, Port Orchard and Sinclair Inlet as far as the Puget Sound Navy Yard as outlined in paragraph 9 of instructions, dated November 10, 1916.

In general the drag was passed so as to verify the 3 fathom curve. This resulted in dragging within about two hundred meters of shore in most cases. The drag was hooked shoal on the inshore end and deepened offshore as rapidly as practicable.

All signals with one exception were located by previous triangulation. The majority of these were located by the party of the Steamer Patterson during the 1915 season and were in good condition so that little signal building was done by the hydrographic party. Station Art is the only station located by this party. This was located by sextant cuts taken at nearby triangulation stations. A list of the signals used is given on Page 1, Volume 1 of the wire drag records.

A depth of forty-five feet or more was verified where ever possible. Changes in charted depths were located as follows:

An 11 foot sounding approximately 150 meters South of the dock at Fort Ward. Two 27 foot soundings, one about 150 meters and the other 200 meters from the beacon at Orchard Rocks. A 29 foot spot 250 meters South of dock at Pleasant Beach. A 16 foot spot about 75 meters off the Pleasant Beach dock. A 28 foot sounding about 400 meters to Northwestward of Pleasant Beach dock.

Three of the above are considered as dangers to navigation and are therefore fully described and located.

A boulder reef with a least depth of 11 feet is located by the following true bearings from the reef:

	Distance.
Fort Ward Dock, light stand,..... 175° 160 meters ✓
Beacon on Orchard Rocks..... 111 480 " ✓
Orchard Point (Orchard) 29 1315 " ✓

It is not marked by Kelp.

A rock with a least depth of 27 feet is located by the following true bearings from the rock:

	Distance.
Orchard Rocks Beacon..... 38° 255 meters. ✓ (poo 38)
Fort Ward dock 307 350 " ✓
A tangent and Point Clover..... 124 1930 " ✓

It is not marked by Kelp.

A A sand bank with a least depth of 16 feet is located by the following true bearings from the bank:

		Distance.
Pleasant Beach dock.....	222°	65 meters. ✓
A tangent to Point Glover	83½	1365 " ✓
Orchard Rocks Beacon.....	345	1615 " ✓

A short drag only was used on this sheet. Strong tides were encountered in Rich's Passage and made it necessary to drag the narrow parts only at or very near slack water.

In all cases, not expecially noted in the records, one foot was taken off the length of upright for lift if the hook up were less than thirty feet. Above thirty feet, the uprights were long and no reduction was made for lift when the hook-up was greater than this.

The plotting of the work on this sheet was done by B. C. Freeman, Aid, and G. L. Bean, Deck Officer. Depths are entered for each foot.

The shoreline was transferred from the chart.

TABLE OF STATISTICS.

Date	Day	Vol.	Linear Miles	Angles	Sdgs. Vol.	Sdgs.	Angles.
Feb. 5	A	1	6.3	268	1	2	5
6	B	1	2.2	122	1	4	8
20	C	1	2.0	120			
21	D	1	2.8	216	1	6	12
23	E	1	8.3	310	1		2
26	F	2	4.6	234	1	1	5
27	G	2	5.2	336	1	1	2
Mar. 3	H	2	2.4	114	1	1	2
5	J	2	3.4	198	1	1	2
Total	9	2	37.2	1918	1	15	36

Respectfully submitted,

B. C. Freeman

Aid, Coast & Geodetic Survey.

Approved

John A. Daniels

Assistant, Coast & Geodetic Survey,
Chief of Party.

ADDRESS
U. S. COAST AND GEODETIC SURVEY
WASHINGTON, D. C.

REFER TO NO.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
WASHINGTON

February 8, 1918 *Drawing Section.*

HYDROGRAPHY ETC., (HT)

LIBRARY

Place with descriptive report
of hydrographic sheet No. 3972

Division of Hydrography & Topography: *Hee*

Division of Charts:

Tidal reductions have been approved in
3 volumes of Wire Drag and Sounding records for

HYDROGRAPHIC SHEET 3972

Richs Passage and Sinclair Inlet, Puget Sd., Wash.
J.A. Daniels in 1917

Plane of reference* is
Mean lower low water, reading
5.3 feet on tide staff at Pleasant Beach, Wash.

*Caution:-

The records were reduced in the field
to the plane of 2 feet below mean lower low
water; to reduce to the new plane of mean
lower low water the soundings and effective
depths must be increased by 2 feet.

*Plot sheet in plane
of mean lower low
water. gft.*

L. P. Shady

Acting Chief, Section of
Tides and Currents.

Hyd. Sheet No 3972

This sheet was plotted by the field party on the old plane of two feet below mean lower low water. In order to avoid erasing and scratching, no attempt was made to change the plane on the original sheet but on the A. & D. tracing all drag depths and actual soundings are shown on the plane of mean lower low water.

Owing to adverse conditions such as strong tides and currents, which could better be allowed for by the field party, the field plotting was followed as closely as possible and was only changed when proven wrong.

A small part of the subdivision was not accurately done and was corrected.

-It is doubtful if the sounding shown as forty feet on the original sheet, in the vicinity of Bainbridge Reef, shows the least depth. Hyd. sheets nos. 2379 and 2483 both show five and one half fathoms while four fathoms is carried on the chart. (Prob. from letter 119 of 1899)

R. L. Johnston

265.

ADDRESS THE DIRECTOR
U. S. COAST AND GEODETIC SURVEY

AND REFER TO NO. 4-DRM

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
WASHINGTON

SECTION OF FIELD RECORDS

Report on Wire Drag Sheet No. 3972.

Surveyed in 1917.

Chief of Party: J. A. Daniels.

Surveyed by: J. A. Daniels and B. C. Freeman. Instructions dated
Nov. 10, 1916.

Protracted and Inked by: B. C. Freeman and G. L. Bean.

Verified and Area and Depth Sheet by: R. L. Johnston

1. The work does not conform to the requirements of paragraph 9 of the specific instructions, which calls for the completed development of Bainbridge Shoal, which is charted from a report as having a depth of 4 fathoms. The drag grounded at a depth of 42 feet, and 42 feet was the least water obtained. As no further investigation was made and as there is a split in the work close by, it cannot be considered that the shoalest water was found on the reef.
2. The least water was not found on the shoals discovered. See above.
3. The overlaps are sufficient.
4. Additional work should be done around Bainbridge Reef to determine the least water. Otherwise this sheet is complete as far as the instructions go.
5. Reviewed by A. L. Shalowitz, November, 1922.

3972 Add'l. Work

WIRE DRAG

3972 Add'l. Work

WIRE DRAG

Form 504	
DEPARTMENT OF COMMERCE	
U. S. COAST AND GEODETIC SURVEY	
....., Director	
<div>G. & G. SURVEY L. & A. JUN 19 1928 Acc. No.</div>	
State: Washington	
DESCRIPTIVE REPORT	
<div>Topographic Hydrographic WIRE DRAG</div>	Sheet No. 3972 Add'l. Work W.D.
LOCALITY	
Puget Sound	
Richs Passage	
1928	
CHIEF OF PARTY	
Chas. Shaw	

GOVERNMENT PRINTING OFFICE

Form 504
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

State: WASHINGTON

11-5613

DESCRIPTIVE REPORT.

Wire Drag Sheet No. Army Engineer's
blueprint

LOCALITY:

RICHES PASSAGE

PUGET SOUND

WASHINGTON

1928

CHIEF OF PARTY:

Charles Shaw

C. & G. SURVEY
L. & A.
FEB 14 1928
Acc. No.

filed in Boat Sh.
3972 Add'l Wk
W.D.

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

WIRE DRAG

HYDROGRAPHIC TITLE SHEET

Prepared in Office - To be shown on orig. Sh.

The finished Hydrographic Sheet is to be accompanied by the following title sheet, filled in as completely as possible, when the sheet is forwarded to the Office.

U. S. Coast and Geodetic Survey.

Register No. 3972 Add'l. Work

State Washington

General locality Puget Sound

Locality Rich's Passage

Chief of party Chas. Shaw

Surveyed by Chas. Shaw

Date of survey Jan. 24, 1928

Scale 10,000

Soundings in Feet

Plane of reference

Protracted by Soundings in pencil by

Inked by Verified by

Records accompanying sheet (check those forwarded):

Des. report, ☒ Tide books, ☐ Marigrams, ☒ Boat sheets, (Eng'r's Blueprint)

☐ Sounding books, ☒ Wire-drag books, ☐ Photographs.

Data from other sources affecting sheet

Remarks: Submitted on Boat Sheet (Engineer's Blueprint)

REPORT OF
WIRE DRAG OF RICH'S PASSAGE
PUGET SOUND, WASHINGTON

Director's orders of January 21st, 1928 to wire drag Rich's Passage shoal in cooperation with the Army Engineers were executed on January 24th, 1928.

The shoal was dragged twice. The first time against a strong current. The drag tests in different sections showed a lift against the current of from nothing to 10 feet. It is thought best to reject this drag area.

At approximately slack water, the shoal was again dragged under good conditions with slow speed. The tests showed no lift. A sag of from nothing to three feet was found in the sections, with 5 of the 9 tests correct with the hook-up, as noted on page 9 of the wire drag record. With these conditions it is thought best to consider the depth throughout of 45 feet, which was the hook-up, less the tide correction of 7 feet, or 38 feet effective.

The shoal was dredged to 40 feet at M L L W.

At the N W point of the shoal the overlap is greater than shown. The drag was towed from westward closer to the Engineer's dolphin. In maneuvering to get by the dolphin, the angles taken show the drag closer to the shoal than it should.

The tides were observed on the Army Engineer's staff by one of their employees.

Mr. Grenell with the Ship's Writer took angles and recorded in the Gig as end launch.

Mr. Greely and myself took angles in the Motorsailer as guide launch, with another Engineer employee recording.

The Ship's Chief Quartermaster was drag tester using a power launch of the Army Engineers.

The SURVEYOR furnished motor engineers for the Gig and the Motorsailer, otherwise the Army Engineers furnished the men for the work.

Charles Shaw

Charles Shaw
H & G Engineer, C & G Survey

STATISTICS SHEET
to accompany

Wire Drag Sheet of Rich's Passage.
Puget Sound, Wn.

Date, 1928.	(Letter)	(Positions)	(Area- Sq. Stat. Miles)
Jan. 24	A	31	1/4

Copy for Section of Field Records files.

June 20, 1923.

Division of Hydrography and Topography:

✓ Division of Charts:

Tide reducers are approved in ¹
volumes of sounding records for

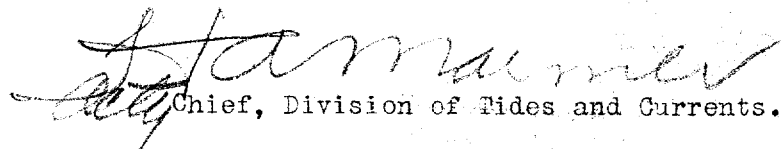
HYDROGRAPHIC SHEET 8972 add'l.

Locality: **RIGGS PASSAGE, PUGET SOUND, WASHINGTON.**

Chief of Party: **Charles Shaw**
Plane of reference is **M L L W**
ft. on tide staff at

Condition of records satisfactory except as checked below:

1. Locality and sublocality of survey omitted.
2. Month and day of month omitted.
3. Time meridian not given at beginning of day's work.
4. Time (whether A.M. or P.M.) not given at beginning of day's work.
5. Soundings (whether in feet or fathoms) not clearly shown in record.
6. Leadline correction entered in wrong column.
7. Field reductions entered in "Office" column.
8. Location of tide gauge not given at beginning of each day's work.
9. Leadline corrections not clearly stated.
10. Kind of sounding tube used not stated.
11. Sounding tube No. entered in column of "Soundings" instead of "Remarks".
12. Legibility of record could be improved.
13. Remarks.


Chief, Division of Tides and Currents.

*Reducers verified from tide observations furnished by U.S. Engineers
as given on page 9 of sounding volume.

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

AND REFER TO No. 11-DEM

WASHINGTON

August 8, 1928.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 3972 (Additional Work)

Richs Passage, Washington

Surveyed in 1928

Chief of Party, Chas. Shaw.

Surveyed by C. S.

Plotted and inked by R. L. Johnston.

Verified by A. L. Shalowitz.

1. This survey consisted of a wire drag examination of a shoal in Richs Passage off Pt. Glover, which the Engineers had dredged to 40 feet at M.L.L.W. An effective depth of 38 feet was carried over the shoal without grounding, and it is therefore safe to assume that no lumps were left by the dredge with a depth less than the depth of the drag and as far as this survey is concerned, all charted depths of less than 38 feet can be removed from the charts.
2. The work is plotted on the 1917 drag survey of this locality (H. 3972) and can be distinguished from the original work by the blue day letters and position numbers. The Area and Depth Sheet has been corrected to incorporate this additional work.
3. Reviewed by A. L. Shalowitz, July, 1928.

Approved:

Chief, Section of Field Records (Charts)

Chief, Section of Field Work (H. & T.)